



Bigger and Better Yields of **ALFALFA**



with
**GOLD SEAL
ALFALFA
SEED**

Western Headquarters for Alfalfa Seed

ALFALFA is one of the most interesting plants known to agriculture. It was known to the Romans, who called the plant "medic" and who probably took it from the land of the Medes. By them it seems to have been spread throughout Europe during their conquests. It was brought into the New World first by the Spaniards during their trips into Mexico and Peru. A little later it was introduced into the colonies of the Atlantic seaboard by the English, French and Germans under the name "lucerne." There are now many varieties of alfalfa in use on the farms of the United States, some of which seem to be much more hardy than others. Of the more hardy varieties are Grimm, Baltic, Cossack and Ladak, with variegated flowers.

*This booklet gives authentic information
on Alfalfa Growing and Seed Selection*

WESTERN SEED COMPANY



Eleven-year-old
Alfalfa Plant
Grown in Colorado

Picture by
courtesy of
Colorado
Agricultural
College



Alfalfa Is First Choice of All Forage Crops

ALFALFA has proved itself far superior to all other forms of forage in food value of needful minerals and vitamins.

Alfalfa is particularly well adapted for growing in the semi-arid conditions of the West. Without it, the development of agriculture in the Rocky Mountain region could not have been what it is today.

The labor alfalfa performs is enormous. Its roots drill for water and its leaves thrive in the sunshine, converting the sunbeams into rich gains for the thrifty farmer and stockman.

Alfalfa forms a partnership with the micro-organisms of the earth by which it is able to enrich the soil upon which it feeds. The roots of alfalfa, when plowed under, will leave in the soil much nitrate plant food for the crops that follow.

Requirements for Various Sections

In choosing a variety or strain, it is well to bear in mind that the quick-growing alfalfas, because of their tendency to produce heavier yields, should be used as far north as they will survive the winters.

Grimm, Baltic, Ladak and Cossack have usually proved more resistant to severe winter conditions and drought than the ordinary strains and therefore give the most satisfactory results where winter-killing is a factor.

Popular Varieties of Alfalfa

Common Alfalfa is a term applied to the purple flowered smooth strains of alfalfa.

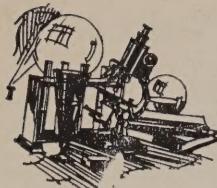
Grimm, Baltic, Ladak and Cossack

are hybrids formed from crosses between common alfalfa and the yellow flowered species. Alfalfa is an open-fertilized plant and as these crosses subsequently inter-cross themselves, a considerable range in flower colors results, and for this reason these hybrids are classed as variegated alfalfa.

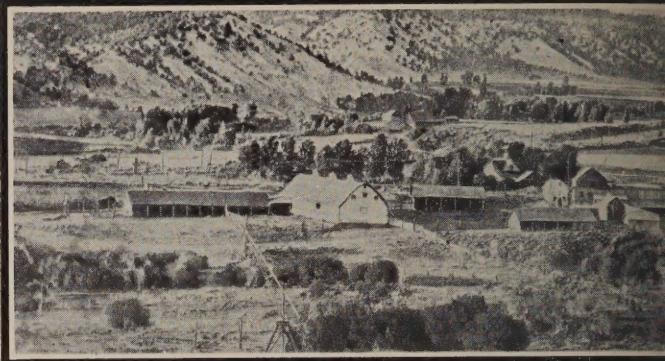
According to accounts, GRIMM Alfalfa was introduced to Minnesota by an immigrant, Wendelin Grimm, from Baden, Germany, and the subsequent seed produced and sold by him was naturally designated as "Grimm's Alfalfa." In this variety the crowns show a tendency to be low set and spreading and the tap-roots are inclined to branch—characteristics which are generally associated with cold resistance. When bought in state-sealed bags with Blue, Red or Yellow tags attached, there can be no doubt about it being genuine Grimm, well adapted for planting in sections requiring hardy seed. Plant more Grimm Alfalfa and lessen winter-killing.

GRIMM Alfalfa is characterized by broad, deep-set crowns and a root system that shows a tendency to branch somewhat more than Common Alfalfa.

It is believed that BALTIC Alfalfa came from Europe and derives this name for the reason that it was produced at Baltic, South Dakota, for a period of years. It is so similar to Grimm Alfalfa that it is seldom possible to distinguish between them,



State Laboratory Tests
show GOLD SEAL
Seeds rank at the top
for purity, germination
and for freedom from
noxious weeds.



The United States Department of Agriculture introduced COSSACK Alfalfa into this country in 1907 from Russia. The flowers show a higher percentage of variegation than the Grimm. Experiments show it compares favorably with Grimm but it is not considered to be superior for most conditions. Seed of this variety is commonly offered in state-sealed bags with Blue, Red or Yellow tags attached to designate the grades.

LADAK Alfalfa is a new, hardy variety developed in northern India and found to possess exceptional resistance to drouth, winter-kill and wilt.

COMMON Alfalfa has distinct taproots. Northern grown strains have somewhat broader crowns and they exhibit more of a tendency to throw out branch roots and fibrous roots.

TURKESTAN Alfalfa is generally characterized by broader, deeper set crowns, and a root system that tends to branch somewhat more than Common Alfalfa. The root system of Turkestan is similar to Grimm.

An Acknowledgment and Appreciation

Much of the information imparted in this pamphlet was secured from Bulletins of the United States Department of Agriculture—particularly Bulletin No. 1087, Alfalfa Root Studies; Farmers' Bulletin No. 1467, Commercial Varieties of Alfalfa; Department Bulletin No. 1418, Fertilizer Experiments With Alfalfa.

Highest Grade of High Altitude Alfalfa Seed Is Gold Seal

In every line there is a leader—a brand that stands for the highest standards of quality and reliability.

In the hardy classes of alfalfa seed, that leader is GOLD SEAL brand.

The farmer can *know* what he is getting by buying the GOLD SEAL brand.

The grower can be *sure* of origin, purity and germination by specifying GOLD SEAL brand.

Bred to Resist Winter-kill

From the wind-swept plateaus of Utah, from the high valleys of Idaho, and from the areas of severe weather conditions of Montana, Wyoming and Colorado comes the famous GOLD SEAL Alfalfa. These regions are subjected to alternate freezing and thawing. They are often visited by periods of extreme cold and drouth. Only hardy plants can survive. Seed from hardy plants produce hardy offspring. It is from time and weather-tested acreage that GOLD SEAL Alfalfa Seed is selected.

Nature recognizes no state lines or boundaries circumscribed by man, but, on account of similar physical characteristics, there are vast regions or districts that produce vegetation under the same conditions of heat and cold, moisture and drouth, and freezing and thawing. Seed produced



Buy and Plant
**GOLD
SEAL
SEEDS**
with
Confidence

in any part of such districts is generally quite suitable for sowing in any other section of it. Agronomists have established quite well-defined regions of adaptability of alfalfa seed and we have been and are recognizing those boundaries.

Highest Quality Seed

GOLD SEAL Alfalfa Seed is packed in hundred-pound branded, sealed bags and is selected, graded and cleaned to ninety-nine and fifty hundredths percent and better, pure.

Expensive cleaning machinery removes the trash, weeds and other foreign matter. Repeated tests by the Colorado Seed Testing Laboratory at Fort Collins have proven the superior quality of GOLD SEAL Seed.

GOLD SEAL Alfalfa is grown at high altitudes and is extremely hardy.

GOLD SEAL Alfalfa is thoroughly tested and the purity and germination is shown on regulation tags attached to every bag.

Suggestions for Best Results

Where winter-killing is a factor, the last cutting of the season should take place early enough to allow for a growth of at least six to eight inches for winter protection.

Alfalfa should not be pastured the first year. It may be pastured lightly the second, but it is better to delay grazing until the third year. Close grazing is injurious to alfalfa at any time, more especially in the late fall

as it leaves the plants in poor condition to go into the winter.

A great deal of winter-killing is the result of alternate freezing and thawing which causes the soil to heave, rupturing the taproots.

A lack of moisture in the soil often results in more severe winter-killing. A late fall irrigation often prevents loss.

Observations of State Experiment Stations

Alfalfa Thrives at High Altitudes

Alfalfa hay is the standard winter roughage in most irrigated or inter-mountain districts. At the Colorado Experiment Station at Fort Collins the variegated alfalfas (many colored blossoms), as Grimm, Baltic and Cossack, have out-yielded other varieties. Seed from northern grown Common Alfalfa has out-yielded crops produced from southern seed.

Seeding Suggestions

A firm seed bed is essential in securing a good stand of alfalfa. It is believed better to drill alfalfa seed in a stubble field without previous preparation than to prepare the field by spring plowing which may cause a loose seed bed. Flood irrigation is desirable on spring-plowed land to insure a firm seed bed and plenty of moisture before seeding alfalfa.

Growing Conditions

Alfalfa is grown successfully at altitudes of 8300 feet in Teller County, Colorado. With dependable snow covering during the winter, it is probable that hardy alfalfa can be successfully grown at altitudes up to 9000 feet.

Alfalfa for Plains Areas

There are many areas in dry land regions such as Eastern Colorado, that are favorably located to produce alfalfa hay. Fields located

in draws or along streams usually have underground water within reach of alfalfa roots. Grimm Alfalfa is the most hardy variety known and will likely give best hay yields. Seeded at the rate of six pounds of seed per acre with seeder attachment for drill as described in seeding sweet clover, should give good results on a well-firmed, moist seed bed. In some districts of Colorado and Montana, alfalfa is grown in rows 21 to 42 inches apart with better results than when broadcast. The disc, spring-tooth harrow or row cultivators, as a four-row beet cultivator, are used to keep down the weeds.

The number of cuttings of alfalfa hay during the season will depend upon the moisture available. A four to six-inch growth should be allowed to remain on the field during the winter to stop drifting snow and prevent soil blowing.

Alfalfa Hay as a Market Crop

There is usually a brisk demand for the better grades and the man who produces a high grade alfalfa usually does not have to worry about finding a market for it at a good price. This is also true at times of the lower grades.

It is easy to produce low grade hay and unless the farmer is experienced in growing high grade alfalfa and is extremely careful at watching every operation in production, he may find his hay classed in the lower grades.

In many parts of the country alfalfa hay is no longer just alfalfa hay. The United States Department of Agriculture has adopted a series of standard grades covering the entire range of possible conditions into which the hay may fall and at points where inspec-

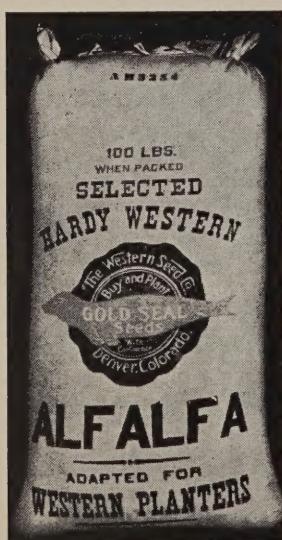
tion offices have been located, considerable quantities of hay are bought and sold on grade.

The essential characteristics of high-grade alfalfa are: A high percentage of clinging leaves, green color, freedom from foreign material, and soundness. Producers who market alfalfa hay must strive to meet these requirements if profitable returns are to be made from alfalfa hay as a cash crop, says the U. S. Department of Agriculture.

To produce the best quality alfalfa, it should be cut when one-tenth to one-fourth in bloom. The stand is likely to thin out after two or three years if the same field, or same portion of the field, is cut at one-tenth to one-fourth bloom each time. Occasionally the plants should be left until they have reached the full bloom stage before being cut for hay. Late-cut alfalfa has relatively hard and woody stems, a low percentage of green color, and is deficient in leaves.

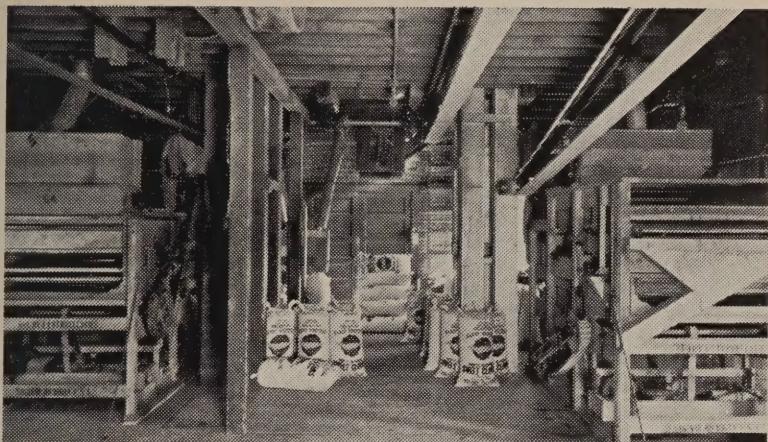
Fertilizing Alfalfa

Fertilizer experiments with alfalfa, conducted at the United States Yuma Field Station, as reported in the United States Department of Agriculture Bulletin No. 1418, have shown pretty conclusively that phosphoric acid, when applied in the form of acid phosphate, increased the alfalfa yield sufficiently to render its use profitable and the beneficial results from applications of acid phosphate are very marked. This bulletin further states that as between 16% and 44% acid phosphate there seems to be little preference, so far as benefit to the alfalfa is concerned, provided equivalent quantities of phosphoric acid are applied.



Roots of Grimm Alfalfa

Roots of Common Alfalfa



Improved Machines Take the Trash Out of Seed

How foolish to plant seeds that are not pure and clean! The harm done by planting seed that contains noxious weeds is vastly greater than is commonly known.

Few persons realize that a low percentage of weed seed in field seed may result in a very thick distribution of such weed seed. For example, one percent of weed seed in red clover may mean as high as 4,000 weed seeds per pound.

In the modern seed refining plant of The Western Seed Company in Denver is ingenious equipment that separates the pure seed from weeds, trash or foreign substances.

The accompanying photo shows a portion of this equipment. The complete process results in *triple cleaned seed*.

Superphosphate Increases Alfalfa 33%

About November 1, 1914, Horticultural Commissioner Wm. Gould of Yolo County applied 500 pounds per acre of Superphosphate to three acres of four-year alfalfa on rich soil, broadcasting it by hand and harrowing it in. Alfalfa from one and one-half acres and adjoining this on similar soil and treated the same except that it was not fertilized, was weighed for comparison. An additional 500 pounds of Superphosphate was applied to the three acres after the first cutting in 1916. The gain in hay was worth two and one-half times the cost of the fer-

To see the heaps of waste matter expelled by these machines is astonishing to anyone who thinks ordinary, good looking seed is O.K. as it comes from the fields.

It Pays to Select Seeds by Standard Specifications

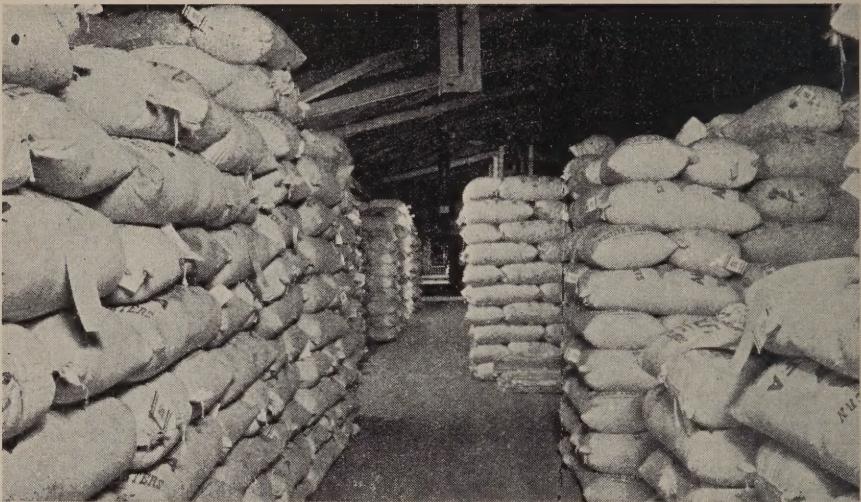
Comparisons of value of almost any products in daily use can be made by specifications.

There is no reason why any purchaser should not buy seeds on the same basis. Reliable seed sellers, conforming with their own desire and with State Seed Laws, furnish Purity and Germination Tests as well as origin of seeds.

Guesswork may be eliminated by buying seeds of known specifications furnished by reliable seed dealers.

tizer and its application. The difference in yield per acre was notable in each cutting of the first year after fertilization, but it was little short of marvelous during the second year. The crop of 1917 must have shown a great increase due to the fertilizer applied in the two years before.

Alfalfa makes good use of soluble phosphates. When Superphosphate is used, the hay produced is of superior quality since through its use the alfalfa is enabled to forge ahead of and smother grasses and weeds so common in the first cutting.



Finest Facilities for Good Service

Storage of reserve stocks under proper conditions, and quick shipment, are two strong points of Western service. The accompanying photo shows one floor of one of our two large warehouses. The seed is kept dry and the bags come to you fresh and clean.

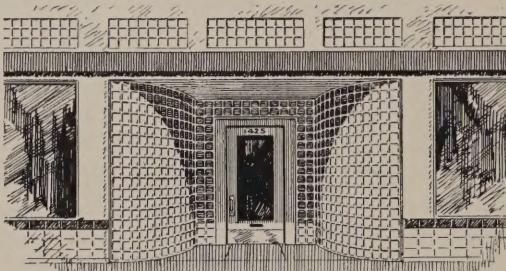
Complete Supply Lines

Through years of serving the growers of this region we have come to learn what kinds of supplies are in demand and what best meets local conditions.

Let us take care of your need in Fertilizers, Insecticides, Spray Equipment, and Tools and Implements.

Also a splendid line of Acclimated Nursery Stock, including Fruit and Ornamental Trees, and Shrubs, Roses, Perennials and Bulbs. See catalog.

**Office and
Retail Store
1421-23-25
Fifteenth St.
Warehouses
1512 Blake St.
1600 Bassett St.**



Big Free Catalog

Describes and Illustrates a Complete Line of Flower, Vegetable, Field Seeds and Nursery Stock
A copy gladly sent upon request

FOR SALE BY

FARMERS and RANCHERS PRICE LIST

WESTERN SEED CO.



1425 FIFTEENTH STREET

DENVER, COLORADO

PHONE TABOR 5-4255



THE WESTERN SEED CO. warrants to the extent of the purchase price that seeds or bulbs sold are as described on the container within recognized tolerances. Seller gives no other or further warranty, expressed or implied.



Seeds on this price list are not quoted Seal-Gro Treated. Add \$1.00 per hundred lbs. for treating. If not specified, seed will be shipped not treated. If an asterisk (*) appears before the item, it cannot be treated.

List No. 1

FEBRUARY 15, 1956

PRICES ARE F.O.B. DENVER. SUBJECT TO CHANGE WITHOUT NOTICE

KAFIR - MAIZE

	(Per 100 lbs.)		
	1 Bag	3 Bags	5 Bags
Hegari	\$ 5.50	\$ 5.40	\$ 5.25
Reliance Milo	5.25	5.15	5.00

MILLETS

Hay Millet (German Type).....	7.50	7.40	7.25
White Wonder	7.50	7.40	7.25
Siberian	5.25	5.15	5.00
Yellow Hog	5.25	5.15	5.00
Red Hog (Early Fortune Type).....	5.25	5.15	5.00

SORGHUMS or CANE

Atlas Sorgo	9.25	9.15	9.00
Coes Sorgo (Dual Purpose Crop).....	5.50	5.40	5.25
Black Amber Type.....	7.50	7.40	7.25
Yellow Sourless Orange.....	8.50	8.40	8.25
Leoti Red Type.....	8.00	7.90	7.75
Sumac or Red Top.....	7.00	6.90	6.75
Mixed Cane	7.50	7.40	7.25

SUDAN GRASS

Extra Fancy Common.....	8.00	7.90	7.75
Fancy Sweet Sudan.....	9.00	8.90	8.75

MISCELLANEOUS

Flax, Bison Type.....	16.00		
Sand or Hairy Vetch.....	22.50	22.25	22.00
Rape, Dwarf Essex.....	18.00	17.75	17.50
Soja Beans, Yellow.....	14.00	13.75	13.50
Pinto Beans	11.50	11.25	11.00

BARLEY

SMALL GRAINS

(Per 100 lbs.)

	1 Bag	3 Bags	5 Bags
Bald, Hulless, or Nepal, Beardless.....	\$ 6.25	\$ 6.15	\$ 6.00
Trebi, Bearded, 6 row.....	5.00	4.90	4.75
Beecher, Dryland	5.00	4.90	4.75

OATS

Brunker, dryland	5.00	4.90	4.75
Colorado 37, midseason, white.....	5.00	4.90	4.75

PEAS

Colorado Stock, San Luis Valley.....	7.50	7.40	7.25
Southern Black-Eyed	10.00	9.90	9.75

RYE

Fall or Winter.....	5.50	5.40	5.25
Balboa, Winter	5.50	5.40	5.25

WHEAT

Thatcher, Spring	6.00	5.90	5.75
------------------------	------	------	------

(over)

HYBRID SEED CORN
PRIDE BRAND HYBRIDS

Private Production Formula — Northern Grown. Sacked in branded
 bushel bags, treated at no extra charge — \$12.20 per bushel.

Production Number		Days to Maturity	Kernels
Pride B-3A	Early	85-90	Medium Flats
Pride B-17A	Early	90-97	Medium Flats
Pride PN-16	Early	93-95	Medium Flats
Pride B-23A	Early	93-97	Medium Flats
Pride B-45A	Medium Early	103-108	Medium Flats
Pride D-66	Late	112-116	Medium Flats
Pride of the North Prairie Silo Blend (Rounds).....		80-90	(\$7.40 bushel)

GOLD SEAL BRAND HYBRIDS

State Production Formula — Colorado Grown. Sacked in Gold Seal
 branded bags, treated at no extra charge — \$10.50 per bushel.

Wisconsin 416AA	Early	95	Large
Wisconsin 464A (Colo. 125)	Medium Early	100	to
C-15, Private Formula	Medium Early	107	Medium
Colorado 152	Medium	110	Flats

OPEN-POLLINATED CORN

	Days to Maturity	(Per 100 lbs.)		
		1 Bag	3 Bags	5 Bags
Colorado Yellow Dent	90-100	\$ 5.50	\$ 5.40	\$ 5.25
Minnesota 13	90-100	5.50	5.40	5.25
Blue Squaw	90-95	7.25	7.15	7.00
Gehu (Yellow) Flint.....	80-90	7.75	7.65	7.50
Rainbow Flint	90-95	7.75	7.65	7.50

62.11

FARMERS and RANCHERS PRICE LIST

WESTERN SEED CO.



1425 FIFTEENTH STREET

DENVER, COLORADO

PHONE TABOR 5-4255



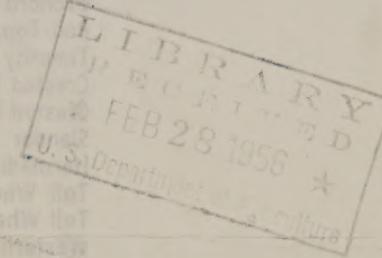
THE WESTERN SEED CO. warrants to the extent of the purchase price that seeds or bulbs sold are as described on the container within recognized tolerances. Seller gives no other or further warranty, expressed or implied.



Seeds on this price list are not quoted Seal-Gro Treated. Add \$1.00 per hundred lbs. for treating. If not specified, seed will be shipped not treated. If an asterisk (*) appears before the item, it cannot be treated.

List No. 1
FEBRUARY 15, 1956

PRICES ARE F.O.B. DENVER. SUBJECT TO CHANGE WITHOUT NOTICE



ALFALFA SEEDS

HARDY COMMON VARIETIES — Gold Seal Grade

	100 lbs.	50 lbs.	25 lbs.	10 lbs.
Colorado	\$28.00	\$14.40	\$ 7.40	\$ 3.20
New Mexico	28.00	14.40	7.40	3.20

HARDY NAMED VARIETIES

Grimm	30.00	15.40	7.90	3.40
Ladak	30.00	15.40	7.90	3.40
Ladak, Certified, Blue Tag (Wyoming).....	33.50	17.15	8.80	3.75
Meeker Baltic, Certified, Blue Tag (Colorado)..	34.00	17.40	8.90	3.80
Ranger	31.00	15.90	8.15	3.50
Ranger, Certified, Blue Tag (Utah).....	34.00	17.40	8.90	3.80
Stafford Variety	29.00	14.90	7.65	3.30

GRAZING VARIETIES

Nomad, Certified, Blue Tag (Northern).....	Less than 10 lbs. \$2.85 per pound
	10 lb. Bags 2.75 per pound
	25 lb. Bags 2.65 per pound

CLOVER SEEDS

SWEET CLOVER

	100 lbs.	50 lbs.	25 lbs.	10 lbs.
Yellow Blossom	16.50	8.65	4.55	2.15
Standard Sweet Clover	19.50	10.15	4.80	2.35
Hubam, Annual White	20.50	10.65	5.55	2.45
Madrid Clover	20.50	10.65	5.55	2.45

OTHER CLOVER

Alsike Clover	34.00	17.40	8.90	3.80
Medium Red Clover	45.00	23.15	11.80	4.90
Mammoth Red Clover	46.00	23.40	11.90	5.00
Korean Lespedeza	28.00	14.40	7.40	3.20
Strawberry Clover	(per lb. \$1.05)			10.00
Birdsfoot Trefoil	(per lb. .55)			5.00
Ladino Clover	(per lb. .75)			7.00
White Dutch Clover.....			(See "Lawn Grass Seed" Price List)	

(over)

(1956)

GRASSES FOR HAY AND PASTURE

	100 lbs.	50 lbs.	25 lbs.	10 lbs.
Brome, Lincoln	\$32.00	\$16.40	\$ 8.40	\$ 3.60
Smooth Brome, Northern.....	27.00	13.90	7.15	3.10
Mountain Brome	37.00	18.90	9.65	4.10
Meadow Fescue	22.00	11.40	5.90	2.60
Orchard Grass	31.00	15.90	8.15	3.15
Red Top, Fancy.....	67.00	33.90	17.15	7.10
Timothy	17.00	8.90	4.65	2.10
Crested Wheatgrass, Regular.....	42.00	21.40	10.90	4.60
Crested Wheatgrass, Fairway.....	55.00	27.90	14.15	5.90
Slender Wheatgrass	40.00	20.40	10.40	4.40
Intermediate Wheatgrass	87.00	43.90	22.15	9.10
Tall Wheatgrass	29.00	14.90	7.65	3.10
Tall Wheatgrass, Certified, Blue Tag.....	31.00	15.90	8.15	3.50
Western Wheatgrass	57.00	28.90	14.40	6.10
Reed Canary Grass.....	37.50	19.15	9.80	4.15
Alta or Tall Fescue.....	18.00	9.40	4.90	2.20
Alta or Tall Fescue, Certified, Blue Tag.....	20.00	10.40	5.40	2.40
Tall Oatgrass (Tulatin).....	60.00	30.40	15.40	6.40
*Blue Grama Grass.....	45.00	22.90	11.65	4.90
*Buffalo Grass, Treated.....(per lb. \$1.00)				9.00
Sand Lovegrass	(per lb. .65)			5.50
Russian Wild Rye	(per lb. \$1.50)			
Pubescent (Stiff Hair Wheatgrass) Blue Tag....(Ask)				

PASTURE MIXTURES

Timothy & Alsike — 10%	20.50	10.65	5.65	2.45
Timothy & Alsike — 20%	22.50	11.65	6.05	2.65
Timothy & Alsike — 30%	24.50	12.65	6.55	2.85
Morton's Pasture Mix.....	28.50	14.65	7.55	3.25
Alkaline Pasture Mix	33.50	17.15	8.80	3.75

LAWN GRASS SEED

A good lawn is the result of good soil, good seed, and good care.

	1 lb.	5 lbs.	10 lbs.
Gold Seal Lawn Mix.....	\$ 1.15	\$ 5.65	\$11.00
Kentucky Blue Grass.....	1.00	4.90	9.50
Merion Blue Grass.....	4.50	22.30	44.00
Domestic Rye Grass.....	.40	1.90	3.90
Perennial Rye Grass.....	.50	2.40	4.00
Red Top Grass.....	1.25	6.15	11.50
Poa Trivialis	1.25	6.15	11.50
Meadow Fescue60	2.90	5.00
Astoria Bent Grass.....	1.50	7.40	14.00
Highland Bent Grass.....	1.25	6.15	12.00
Seaside Bent Grass.....	2.00	9.90	19.00
Chewings Fescue	1.00	4.90	9.00
Creeping Red Fescue.....	1.00	4.90	9.00
Bermuda Grass75	3.65	7.00
Shady Lawn Grass Mixture.....	1.25	6.15	12.00
Fairway Crested Wheatgrass.....	.75	3.65	7.00
Buffalo Grass (Treated).....	1.50	6.15	12.00
White Dutch Clover.....(4 oz. 50c; 8 oz. 90c)	1.50	7.40	14.00

(over)

GET / HTTP/1.1
Host: ip-10-11-211-49.nal.usda.gov:9100
Accept-Charset: iso-8859-1,utf-8;q=0.9,*;q=0.1
Accept-Language: en
Connection: Keep-Alive
User-Agent: Mozilla/4.0 (compatible; MSIE 8.0; Windows NT 5.1; Trident/4.0)
Pragma: no-cache
Accept: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, image/png, */*

